

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 7, line 26, with the following amended paragraph:

--Figure 1 illustrates a research system 100 that includes a general-purpose programmable digital computer system 110 of conventional construction, including a memory 112 and a processor 117 for running a research system program 120. Computer system 110 also includes conventional communications hardware and software by which computer system 110 can be connected to other computer systems, including a user's computer system 130 including a memory 132 and a processor 137 running a remote user interface program 150, by a computer network 140, such as a local area network, wide area network or the internet. Although FIG. 1 illustrates each computer system as a single computer, the functions of each system can be distributed on a network.--

Please replace the paragraph beginning at page 10, line 21, with the following amended paragraph:

--Users access user interface subsystem 220 through remote user interface program 150 running on user's computer system 130 (which can be a stand-alone experiment design tool program, or a client program such as a web browser configured to access an experiment design tool program running on research system 100) and remotely design experiments to be executed by research system 100. In one implementation, user interface subsystem 220 controls the remote user interface program in a server/client relationship, providing that program with access to information in inventory database 250 and process database 260 concerning the availability of particular materials and experimental methods in a user's experiment design. Optionally, remote user interface program 150 and/or user interface subsystem 220 can be configured to restrict the user's access to information in databases 250, 260 (and 270) based on user-specific business rules (for example, rules based on or stored as customer information in customer database 240). Such rules can be configured by the user, the user's organization, or the operator of research system 100 to limit or focus the user's ability to design experiments to match the

user's business. Thus, for example, if a user designing a set of experiments specifies a particular screening method from process database 260, user interface subsystem 220 will respond with a choice of materials from inventory database 250 that are identified by the stored design rules as suitable for characterization by that screening method; conversely, if the user selects a particular chemical or material from inventory database 250, user interface subsystem ~~22~~ 220 will invoke the applicable design rules to respond with a choice of experimental procedures or screening methods from process database 260 that research system 100 is configured to perform using that material. Likewise, if the user's customer information identifies the user's business as specialty polymers, user interface 220 can limit the user's design choices to materials and methods appropriate for experiments in that field. Optionally, in these implementations remote user interface program 150 can be configured to permit the user to search inventory database 250 and process database 260 to retrieve information about what materials and methods can be incorporated into experiment designs for execution by research system 100. In other implementations, design rules based on information in inventory database 250 and process database 260 can be incorporated directly into remote user interface program 150, such that an open connection with user interface subsystem 220 is not required during experiment design. User interface subsystem 220 receives an experiment request embodying the user's experiment design and passes the request to research engine 230 and laboratory personnel for evaluation. Optionally, user interface subsystem 220 also provides a user interface through which a user can monitor the progress of the experiments, such as a search program for searching and analyzing experimental data stored in an experiment database 270.—

Please replace the paragraph beginning at page 15, line 7, with the following amended paragraph:

--As mentioned above, the user registers with research system 100 and establishes an account in step 305. When the user accesses user interface subsystem 220 – for example, by connecting the user's client system 130 to a server running research system program 120 over an internet connection, accessing a web site maintained by research system 100 or dialing in to a server running research system program 120 – user interface

subsystem ~~210~~ 220 determines whether the user has previously accessed research system 100, for example by detecting a cookie on the user's computer system 130 or by searching customer database 240 for a customer record for the user. If the user has not previously accessed research system 100, user interface subsystem 220 prompts the user to provide identifying customer information, including a user name, password and contact information as described above. Customer information subsystem 200 adds a new customer record to customer database 240 and, in world wide web implementations, places a cookie on the user's computer system 130. For users who have previously registered with research system 100, user interface subsystem 220 prompts the user to enter a user name and password, and verifies that information against the corresponding customer record in customer database 240 before allowing the user to proceed.—

Please replace the paragraph beginning at page 18, line 18, with the following amended paragraph:

--Based on the user's library design, remote user interface program ~~430~~ 150 creates a set of material handling instructions, which can take the form of a data file or "recipe file" that can be implemented by automated synthesis instruments controlled by research engine 230, as described in co-pending U.S. Patent Application No. 09/305,830, filed on May 5, 1999, which is incorporated by reference herein. Remote user interface program 150 packages this recipe file with the user's specified screening information selecting one or more high-throughput screening methods to form an experiment request (step 450). Remote user interface program 150 also calculates an initial estimate of the cost of the set of experiments defined by the experiment request and the time that research system 100 would require to execute the set of experiments. The user can then send the request to user interface subsystem 220 in step 330 above.--

Please replace the paragraph beginning at page 20, line 17, with the following amended paragraph:

--For repeat users, research system 100 can provide additional data management capabilities through a graphical data explorer program implemented by user interface subsystem 220 (either incorporated in remote user interface program 150 or remotely

accessed by client software running on the user's computer system 130). The data explorer program provides the user with the ability to search and manipulate data from multiple experiments stored in experiment database 270 maintained by the operator of research system 100. Using the data explorer program, the user can access a search function implemented by user interface subsystem 220 with conventional database tools that permits the user to construct search queries to interrogate the experiment database based on simple experimental variables such as library design, composition or processing conditions, analytical or screening methods or measured or calculated properties, or on more complex relationships such as experimental trends or series. In one implementation, the data explorer program accesses only data stored in an experiment database 270 corresponding to experiments requested by a single user or institution, which both relieves the user or institution from the burden of creating and maintaining its own database and maintains the security of the user's or institution's experimental data. Alternatively, the data explorer program can provide users with access to experimental results from a broader range of experiments in one or more ~~experimental~~ experiment databases 270 -- for example, a user can purchase the right to access an aggregate database for a fee or by agreeing to submit the user's own results to the aggregate database.--